

Notice of Allowability

Application No.

10/091,059

Examiner

Ted M. Wang

Applicant(s)

KIM, CHUL-JIN

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 09/06/2005.
2. ☒ The allowed claim(s) is/are 1 and 4-17.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 11/23/2005.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Response to Arguments

1. Applicant's amendments and arguments, filed 09/06/2005, with respect to claims 1 and 4-17 have been fully considered and are persuasive. Therefore, the rejection under 35 USC § 103(a) has been withdrawn.

Examiner Amendments

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

3. Authorization for this examiner's amendment was given in a telephone interview with Applicant's representative William Hoofe IV on November 23, 2005.

4. The application has been amended as follows:

In the claims:

- Change Claim 11 as following:

11. (Currently Amended) A method for recovering data in a communications system, comprising the steps of:

demodulating a transmission signal;

tracking signal patterns of the demodulated signal to generate a plurality of synchronous signals;

limiting a voltage range of the demodulated signal to a predetermined voltage range using a level controller, wherein the level controller excludes voltages levels outside a voltage range that includes sampling points of the synchronous signals, the sampling points being used in recovering the original data;

selecting one of the synchronous signals based on a detected phase variation of the demodulated signal from the level controller; and
recovering data from the demodulated signal using the selected synchronous signal.

- Change Claim 14 as following:

14. (Currently Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for recovering data in a communications system, the method steps comprising:

demodulating a transmission signal;

tracking signal patterns of the demodulated signal to generate a plurality of corresponding synchronous signals and lock signals;

limiting a voltage range of the demodulated signal to a predetermined voltage range using a level controller, wherein the level controller excludes voltages levels outside a voltage range that includes sampling points of the

synchronous signals, the sampling points being used in recovering the original data;

selectively activating the lock signal based on a detected phase variation of the demodulated signal from the level controller to select one of the synchronous signals; and

recovering data from the demodulated signal using the selected synchronous signal.

Allowable Subject Matter

5. Claims 1 and 4-17 are allowed.
6. The following is an examiner's statement of reasons for allowance.
 - The prior art fails to teach an apparatus of Claims 1, 8, 11, and 14 that specifically comprises the following:
 - The instant application is deemed to be directed to a non-obvious improvement over the admitted prior art of the instant application and the invention patented in Pat. No. US 5,204,879, US 5,521,941, US 5,859,671, and US 6,504,838. The improvement comprises "a level controller for limiting a voltage range of the demodulated signal to a predetermined voltage range, wherein the level controller excludes voltages levels outside a voltage range that includes sampling points of the synchronous signals, the sampling points being used in recovering the original data; a plurality of symbol recovery units, each detecting a signal

from the level controller and generating a corresponding synchronous signal and a lock signal," as recited.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

8. Reference(s) US 6,504,838 is cited because it puts pertinent to the data recovery system with programmable instruction stored in a readable device. However, none of references teach detailed connection as recited in claim.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M. Wang whose telephone number is (571) 272-3053. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571) 272-3056. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

Ted M Wang

Examiner

Art Unit 2634

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